

**Air Drainage** - It is important to select a site where the tree will not be in a “frost pocket”, where cold air settles in low-lying areas. In a frost pocket, low spring temperatures commonly kill the blossoms or developing fruit because cold air settles around the tree. Good air drainage, especially during early spring frosts, is critical. Choose a higher site with a slope if possible so cold air will flow down away from the trees and will not accumulate around the trees. Do not plant the trees close to a fence row, wooded area, or at the bottom of a hill, as cold air drainage will be impeded.

**Other Considerations** - Apple trees require full sun and should be planted where the trees will not be shaded from large trees or buildings. Follow tree spacing guidelines that pertain to the rootstock you have chosen from Table 1. Do not plant trees near wooded areas or streams to avoid animal damage. Prior to planting, remove weeds either manually or with an approved herbicide that will not harm the young tree. If you are planting the tree in a lawn, remove the grass from the planting area in a 4-foot diameter circle. Grass competes with young trees for available water and nutrients and can significantly reduce tree growth and productivity.

### **Planting the Tree**

**Tree Purchase and Preparation** - Purchase a healthy 1-year-old nursery tree, 4 to 6 feet tall, with a good root system. A small tree with a good root system will transplant better than a large tree. When you get the tree, protect it from injury, drying out, mouse or vole damage, freezing, and overheating. If the roots have dried somewhat, soak them in water for about 24 hours before planting. If you are unable to plant the tree immediately, there are two options:

- 1) Wrap the roots in plastic along with moist sawdust or newspaper, and place the tree in a refrigerator or cooler at 40°F. Never store the tree with fruit or vegetables, as ethylene gas from ripening foods can kill young trees.
- 2) “Heel-in” the tree. To heel-in a tree, dig a trench and place the tree roots evenly in it, cover the roots with soil, sawdust or peat, and water the tree thoroughly. The tree can be kept for several weeks using this method before permanently planting.

**Planting the Tree** - In North Carolina, trees can be set from late fall to early spring. To plant the apple tree, first dig a hole approximately twice the diameter of the root system and 2 feet deep. Place some of the loose soil back into the hole and loosen the soil on the walls of the planting hole so the roots can easily penetrate the soil. Spread the tree roots on the loose soil, making sure they are not twisted or crowded in the hole. Continue to replace soil around the roots. As you begin to cover the roots, firm the soil to be sure it surrounds the roots and to remove air pockets. Do not add fertilizer at planting time as the roots can be “burned”. Fill the remainder of the hole with the loose soil, and press the soil down well. **Important:** The graft union must be at least 2 inches above the soil line so that roots do not emerge from the scion. When you have finished planting the tree, water well to eliminate air pockets and provide good contact between the roots and the soil.

### **Training and Pruning Central Leader Trees**

Proper training and pruning of fruit trees is essential to the development of a strong tree framework that will support fruit production. Properly shaped trees will yield high-quality fruit much sooner and will live significantly longer. Regular pruning and training will also maximize light penetration to the developing flower buds and fruit. Additionally, a well-shaped tree canopy permits adequate air movement through the tree, which promotes rapid drying to minimize pest problems.

**Central Leader Trees** - A central leader tree has one main, upright trunk, called the “leader”. Branching should begin on the leader 24 to 36 inches above the soil surface to allow work under the tree. The first year, 3 to 4 branches, collectively called a “scaffold whorl”, are selected. The selected branches should be spaced uniformly around the trunk, not directly across from or above one another. The major lateral branches are commonly referred to as scaffold branches on which the central leader tree is “built”. Above the first scaffold whorl should be an area of 18 to 24 inches, called a “light slot”, without any branches to allow light to reach all lower leaves and fruit. This light slot is followed by another whorl of scaffolds. Maintain alternating scaffold whorls and light slots up the leader to the desired maximum tree height. The shape of a properly trained central leader